

California Wing Communications



CAWg Comm Today



Operations

VHF Frequency Usage

- CAP has multiple VHF frequencies.
- Most message traffic uses the primary repeater pair. If you are setting up an event, and don't need to use the repeaters, consider using another freq.
- Don't use a "long range" repeater if you can get by with a shorter range one.
- Don't use any repeater if you can get by using simplex.



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VHF Frequency Usage

- CAP is changing how mission communications are accomplished.
- Different functions within large missions should be on separate frequencies.
- Some functions may need more than one frequency. Some functions will need repeaters, but many will not.
- Some functions will leave VHF totally and move to HF or UHF (on ISRs).



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Frequency Assignments

- CAP is changing most of its VHF freqs. We will lose most of our old ones.
- We will get more than we now have.
- Could happen as early as 2006.
- But will probably happen in 2007.
- The time frame for converting to the new frequencies is still not known.



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Channel Plan Updates

- All existing CAP channel plans will have to be updated twice during that period.
- First update will need three sections:
 - Current CAP frequencies
 - New CAP frequencies (Narrow band only!)
 - Other agency frequencies (Will some of these change? We don't know yet, but anything in the 138-150.8 MHz range will probably change.)
- Final update will not have the old frequencies in it because those frequencies won't be ours any more.



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Comm in a Multi-Agency Environment

- ◊ *Multi-agency tasking seems to be the wave of the future in CAP operations.*
- ◊ *Multi-agency missions will probably be larger in size (the number of personnel and sites involved in the operations).*
- ◊ *Examples are: the Columbia shuttle debris mission and the CAWg evaluated SAREXs (both OREs and the ORI).*



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Large Missions / Multiple Bases

- ◊ *Multiple bases (and possibly multiple missions) require that CAWg develop a very flexible mission comm plan.*
- ◊ *We have to re-evaluate how we have done things in the past and decide what changes need to be made for the future.*
- ◊ *Efficient use of resources (personnel and freqs) requires that we rethink what should (and what should not) be located in the Communications Center.*



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Tactical HF Comm

- ◊ *NHQ/DOK encourages all CAP wings to make increased use of HF comm in the tactical (mission) environment.*
- ◊ *Since 4 MHz is not a great daytime band for tactical, we're going to have to get used to using other HF frequencies.*
- ◊ *CAWg communicators need to know how to select the best available HF band frequency for prevailing conditions.*



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FAA Air-to-Ground

- There are two FAA freqs used for SAR air-to-ground comm (122.9 & 123.1 MHz AM).
- By direction of the FAA, these freqs are NOT for agency internal use. They are only for inter-agency use (no CAP-to-CAP).
- Remember that on these frequencies:
Every ES agency within line of sight may be listening!!!



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Other Agency Frequencies

- CAP has MOUs with other agencies.
- Those MOUs allow us to use those agencies' frequencies when necessary.
- Not used for CAP-to-CAP communications!!!
- Documentation for most of these is filed at NHQ. The rest are at CAWg HQ.
- The IC and CUL are responsible for ensuring the frequencies you are using are approved for use during a mission. The IC has the final authority.



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Never Forget!!!

During any mission, the final authority on anything that has to do with mission communications is the **Incident Commander**. If you cannot accept that, then log-out and go home.



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Mission Call Signs – Pt 1

Question: Should We Use Tactical or Functional Call Signs?

CAPR 100-1 Vol 1 Para 7-15(c): “During actual/practice search and rescue missions and special events, temporary functional call signs may be assigned. The wing DC, the mission commander, or the special events commander have the authority to use this option...”



Answer: “Whichever”

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Recommendation of the DC

“This is only technique, but...”

- 1 IC & 1 GT: Either (but functional is preferred)
 - 1 IC & 2 or more GTs: Should use functional
 - 2 or more ICs (or multi-base) and any number of GTs: Always use functional
- “Was that Yosemite 575, 755, or 775 and which mission are you on, anyway?”
- A bonus, with functional call signs, anyone who hears any of the traffic knows there is a mission in progress.



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Mission Call Signs – Pt 2

Which “Ground Team 1” are you calling?

- If you’ve got two or more missions working within possible communications range of each other, having multiple ground teams with the same number can be confusing.
- If you insert the group number into the call sign, it could make communications clearer.



“Ground Team 71”, “Ground Team 61”,
“Ground Team 31”, etc.

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The RTO

- “RTO” is the military acronym for “Radio Telephone Operator”.
- An RTO is the communicator in direct support of a command or staff officer.
- An RTO is a “force multiplier” because they relieve that officer of having to worry about how comm “gets done”.
- CAWg Comm is considering including some RTO training into our ACUTs.



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The RTO

- An RTO will have to be an experienced, mission qualified, communicator.
- If they do their job correctly, they will handle much of the communications load without having to ask questions.
- They will learn more while they are doing their jobs. Meaning even fewer questions will have to go “up the line”.



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Equipment

HF Communications

- ◊ NHQ/DOK encourages all CAP wings to make greater use of HF communications.
- ◊ CAWg hasn't received any new HF radios since the Micom2s. New HF radios not likely until 2006. Those will probably be Micom2e ALE radios.
- ◊ Next group of HF radios is supposed to be shipped as systems (with power supplies, antennas, maybe cables.)



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Intra-Squad Radios (ISR)

- ◊ Initial shipment (of 163 ISRs) has been received. We may get over 1000 more.
- ◊ The ISRs were not issued to units or members. They are in 32 comm kits.
- ◊ All groups have either 3 or 4 ISR kits. Wing has 6 kits. 3 for NorCal and 3 for SoCal. Kits should be shared!!!
- ◊ Initial experience has shown some a tendency toward abuse.



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Intra-Squad Radios (ISR)



Five radios in each kit. ISR runs on 3 AA batteries. The user supplies the batteries.

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Stealth Hand Helds



- Cost: \$1752.00
- Weight: 1.5 lbs
- Distribution controlled by the TA and the Operations shop.



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Table of Allowances

- NHQ/DOK has issued the first iteration of the new Table of Allowances.
- That TA says who can have what types of communications equipment.
- The TA is not a static document. It will be changed as our missions, and DOK's understanding of our missions, change.
- The TA includes radios, power supplies, antennas, and other support gear.



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"Systems" not "Radios"

- In the past, NHQ sent us radios and not complete systems (Ex: Micoms, Tails, Stealths).
- As funding develops, they are going to send us both the radios and the support equipment necessary to get them into the field and onto the air.
 - Radios, power supplies, antennas, and maybe cables
- This means that CAWg will be able to get the radios into the field in a more timely manner in the future.



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"Trophy" Radios

- NHQ/DOK is concerned about radios that are requested for reasons other than established operational need (not per the TAs).
- DOK calls these "Trophy Radios".
- They will be looking at requests to see if any of them fit into that category. It may wind up being an inspection item.
- Trophy radios divert comm assets to areas where they aren't needed to accomplish our missions. They use up scarce dollars that are needed elsewhere.



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Radio Maintenance

How Do You Get a Broken Radio Repaired?

- Micoms Sent to NTC
- EFJ Stealths Sent to NTC
- Tait T2020s North American Tait (?)
- Neutecs Sent to Arkansas (NTC pays?)
- By order of NHQ and CAWg/CC, individual units will NOT send radios off to be repaired. Contact CAWg/LG or DC for assistance.
- NHQ/CAWg will pay for some, possibly all, repairs that are "normal wear and tear" (non-abuse).



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Procedures

Message Format

Over 90% of all CAWg message traffic is improperly formatted!

- *Precedence* (Flash, Immediate, Priority, or Routine)
- *Date-Time-Group* ("182347Z Oct 03")
- *"From" address* (who wrote or authorized the message)
- *"To" addressee(s)* (these are the "action addressee(s)")
- *"Info" addressee(s)* (the "non-action addressee(s)")
- Then "BT" or "Break", the message text, a final "BT" or "Break", and then any necessary operator notes.



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Proper Message Format

Routine

182347Z Oct 03

From: HQ CAWg/DC

To: HQ All Units/DC, CC

Info: HQ All Units/DO, DOS

BT

This is a properly formatted message.

BT

Delivery ACK requested



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Message Notes

- *What about "Mayday", "Pan", and "Securite" Aren't they priorities?*

No, they are "urgency signals" and are treated as if they were just above "Immediate" precedence. They will preempt any traffic below "Flash". The urgency signals will go in the body of the text, not the header.

- *What about "REDCAP"?*

It is now considered an acceptable but obsolete term. It just tells the message recipient what type of message it is. If used, it is also included in the body of the text and not the header.



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When Drafting Messages...

"This is only technique, but..."

- **IN THE EMAIL VERSION OF YOUR MESSAGE, DO NOT FORGET TO USE LOWER CASE LETTERS. IF EVERYTHING IS IN UPPER CASE LETTERS, PEOPLE WILL THINK YOU ARE SHOUTING AT THEM.** *And you will be shouting at them.*

- *We have both upper and lower case letters available. Please use them both. It makes the message much easier to read and to understand. However, all messages will be transmitted over the radio as if they were in upper case (except URLs, etc.).*



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Mission Traffic During Nets

- *Mission message traffic (always Priority or Immediate) has right of way over normal net traffic (which is usually Routine).*
- *However, a mission in progress does not mean that the net must be cancelled.*
- *If mission conditions permit, the net should proceed as scheduled.*
- *If a mission is in progress, the net control station (NCS) will contact the IC and get permission to proceed.*



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Mission Traffic During Nets

- *The ICs should allow the net to proceed unless they are confident that the net will interfere with mission activities.*
- *When starting the net, the NCS should state that mission traffic has priority and may preempt any and all other traffic.*
- *If a mission is in progress and the NCS is not aware of it, someone aware of the mission should notify the NCS.*



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Mission Traffic During Nets

- Any net participant hearing mission traffic that the NCS doesn't acknowledge should break in and inform the NCS.
- Routine net traffic may continue after the mission traffic is concluded.
- This applies to both formal and informal traffic.
- Any station checking-in to the net while on mission status (but not passing mission traffic) should use their tactical call sign and not their functional call sign (i.e., Yosemite 755 instead of CAPFlight 432).



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Training

BCUT/ACUT What and Why

- Basic Communications User Training (BCUT) is for people who are not comm troops, but may occasionally use radios.
- Advanced Communications User Training (ACUT) is designed for troops who want or need to know more about communications.
- In CAWg, a BCUT is good for two years and an ACUT never expires.
- This may change. NHQ/DOK is not happy about ACUT authorizations that never expire.



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BCUT/ACUT What and Why

- *In Emergency Services (for mission communications), the only specialties that require an ACUT are CUL and GTL.*
- *Most others, either directly or indirectly, require a BCUT, even MSA (the exceptions are MS, LSC, and FASC).*
- *MRO may get additional requirements.*
- *Communications technically belongs to Logistics, but the Comm Center will usually be "chopped" to Operations.*



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BCUT/ACUT Changes

- *7th Group communicators have developed a computer based BCUT course.*
- *This course is designed to be taught at the squadron level, to an individual or a small group, by any ACUT holding communicator.*
- *The formal ROA classes will no longer teach the BCUT syllabus. A BCUT will be required for admission to the ACUT course.*
- *This will allow the ROA classes to present an increased amount of technical material.*



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BCUT/ACUT Changes

- *CAWg/CC and CAWg/DC have approved it for use throughout the wing.*
- *NHQ/DOK and other wings are evaluating it for use throughout CAP.*
- *The course (a PowerPoint presentation with both audio and video) fits on a single CD.*
- *The CDs have been sent to each group DC and they are authorized to make as many copies as they need (1 per squadron?). Or:*



http://meteoara.ucsd.edu/weather/work/CAWg_BCUT_Audio_200401.ppt

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Processing ROA Forms

- ◊ *Current processing has a built in delay since it requires the squadron CC's or DC's to approve the member's ROA twice:*
 1. CAPF 17/31 (or CAWgF 31) for course approval
 2. CAPF 2a ROA approval after the course is completed
- ◊ *We are changing the routing of the course completion CAPF 2a. It will now go directly from the ROA course director to the CAWg/DCL. A report will go to groups.*



Rationale: The unit OK'd the ROA when they signed the initial form 17/31.

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Tone Squelch on Receive

- ◊ *Some VHF radios have tone squelch (TSq) enabled. That means they can only listen to one repeater at a time.*
- ◊ *If you need to monitor more than one repeater at one time, you need to know how to disable this feature.*
- ◊ *Different radios have different controls.*
- ◊ *You need to be familiar with (or have manuals for) the radios you use.*



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Cadet VHF Nets

- ◊ *CAWg is trying to set up two, perhaps three, regional Cadet VHF Nets (NorCal, SoCal, and perhaps CenCal).*
- ◊ *The nets should be of, by, and for the cadets. SM communicators will mentor and monitor.*
- ◊ *In SoCal, the Cadet VHF Nets may start at the conclusion of the regular nets. How they will run in the NorCal/CenCal is undecided.*
- ◊ *Content of the nets should be determined by the cadets (but stay within CAP regs).*



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Communications Officers

Who Can Be a Comm Officer?

CAPR 20-1 Part III says a Comm Officer will be able to:

- Develop and implement communications plans, programs, and directives in close coordination and in support of command, operations and emergency services.
- Establish requirements and track acquisition and disposition of communication equipment in coordination with logistics.
- Coordinate communications plans and programs with other staff agencies and with subordinate and higher headquarters.
- Develop detailed operating procedures for communications operations and guidance to subordinate units and personnel.
- Collect and report data to determine the effectiveness of communications operations.
- Coordinate licensing or frequency authorizations for all radio operations.



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Communications Officers

- Develop communications training programs.
- Coordinate communications conferences, meetings, and workshops.
- Monitor unit communications.
- Establish programs to maintain and operate unit radio equipment.
- The communications officer should have a working knowledge of CAPP 214 and CAP directives in the 50, [60], 67, and 100 series and the NTIA manual of regulations and procedures for Federal Radio Frequency Management.



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CAPP 214 & Net Participation

- Per NHQ/DOK, net participation (either VHF or HF) will remain as a requirement for advancing in the Communications Officer specialty track.
- Required for Tech, Senior, and Master ratings.
- DOK feels that some net experience is vital to becoming a qualified CAP communicator.
- They are re-evaluating the amount of net participation that is necessary for qualification (now at 25%). A new CAPP 214 is being written and the percentage may change.



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Riddle's Rules of Etiquette

1. Always yield the channel to higher priority traffic. Mission traffic is always either Immediate or Priority.
2. Never use "Yosemite" callsigns during actual or exercise missions.
3. Be careful of duplicate callsigns. ICs should coordinate separate missions.
4. Never use "more repeater" than you have to. Have you tried simplex?



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Riddle's Rules of Etiquette

5. Everybody local? Use an alternate freq.
6. Do not press PTT at 0230L just to see if you can get a squelch tail. Some troops sleep near their radios during missions.
7. "Real communicators" help each other. If you hear someone having difficulty, offer to assist them.
8. Keep a mission comm log. CAPF 110 or ICS 214 are best, but a napkin or a paper fast food bag is better than nothing.



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Riddle's Rules of Etiquette

9. The Incident Commander, not the regs, run the mission. If you cannot accept that, don't argue, just sign-out and go home.
10. Don't invent callsigns. Tactical calls are assigned. Functional calls are descriptive. "Eagle 1", "Shadow", "Rimrunner", etc. are not authorized. This goes for ISRs, too.



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Riddle's Rules of Etiquette

11. *Always include a geographic reference in your functional callsigns if you are using long distance comm. Use "Flatbush IC" and not just "IC".*
12. *Good communications are clear and concise. Keep it short. Don't use your callsign any more than necessary. It's there to help identify you, not to slow down communications for others.*



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Riddle's Rules of Etiquette

13. *If you are someone's RTO, answer up when they are called. Don't wait for them to tell you to answer.*
14. *Make two attempts at contact, not just one. The other station might not have heard the first call clearly.*
15. *End your contact with "Out". That releases the frequency for others. Don't make them guess.*



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Riddle's Rules of Etiquette

16. *If you are not logged into a mission, it is still legal for you to assist. If you hear someone trying to make contact with another station and they are not successful, it is OK for you to offer to help with a relay.*
17. *There is no regulation or policy that outlaws the use of common sense. If it is not in the regs, try your best guess. But be logical. If it's not in the regs, maybe it is a bad idea.*



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Questions?

*If there are no questions, then
I have to believe that
nobody was listening.*



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